

**Bonneville Power Administration
Fish and Wildlife Program FY99 Proposal**

Section 1. General administrative information

Improve Anadromous Fish Habitat And Passage In Omak Creek

Bonneville project number, if an ongoing project 9017

Business name of agency, institution or organization requesting funding
Colville Confederated Tribes

Business acronym (if appropriate) CCT

Proposal contact person or principal investigator:

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Subcontractors.

Organization	Mailing Address	City, ST Zip	Contact Name
Natural Resources Conservation Service (NRCS)	1251 S. 2nd Avenue	Okanogan, WA 98840	Randy Kelly

NPPC Program Measure Number(s) which this project addresses.
7.6a, 7.6a.2, 7.6c

NMFS Biological Opinion Number(s) which this project addresses.

A biological opinion is expected from NMFS addressing the potential of Omak Creek upon the restoration of mid-Columbia River summer steelhead. However, at this time a biological opinion has not been developed.

Other planning document references.

Subbasin.

none

Short description.

Removal of debris and rubble in the stream channel, created by construction of a railroad, will allow anadromous fish to migrate over Mission Falls and access upstream spawning habitat. Restore bank stability and riparian vegetation along Omak Creek

Section 2. Key words

Mark	Programmatic Categories	Mark	Activities	Mark	Project Types
X	Anadromous fish	X	Construction	*	Watershed
	Resident fish		O & M	*	Biodiversity/genetics
	Wildlife		Production		Population dynamics
	Oceans/estuaries		Research		Ecosystems
	Climate		Monitoring/eval.		Flow/survival
	Other		Resource mgmt		Fish disease
			Planning/admin.		Supplementation
			Enforcement	X	Wildlife habitat en-
			Acquisitions		hancement/restoration

Other keywords.

Passage, Cultural significance, Habitat, Endangered Species Act

Section 3. Relationships to other Bonneville projects

Project #	Project title/description	Nature of relationship
	none	

Section 4. Objectives, tasks and schedules

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Provide passage for anadromous fish upstream of Mission Falls,	a	Remove rubble, cribbing, and railroad ties from stream channel

	Omak Creek		
2	Restore fish habitat in Omak Creek and connected tributaries	a	Identify areas deficient in suitable spawning and rearing habitat, particularly for summer steelhead
		b	Implement instream restoration structures and restore riparian vegetation to historical condition and composition to improve spawning and rearing habitat particularly for summer steelhead
		c	Alter activities (forestry practices, livestock grazing) which currently reduce the quantity and quality of spawning and rearing particularly for summer steelhead

Objective schedules and costs

Objective #	Start Date mm/yyyy	End Date mm/yyyy	Cost %
1	5/1998	10/2000	60.00%
2	4/1998	10/2007	40.00%
			TOTAL 100.00%

Schedule constraints.

For objective 1 the reach may need to be revisited after the initial removal of rubble occurs. This is because rubble, that previously was not a barrier before the first removal, may become a barrier after the rubble has been removed.

Completion date.

We expect the ending date would be December 31, 2008. This would allow an additional year to complete tasks that may have been modified due to unforeseen delays (i.e. equipment breakdown, labor availability, material availability).

Section 5. Budget

FY99 budget by line item

Item	Note	FY99
Personnel	1 Full time employee; 3 Seasonal	\$40,000

	employees	
Fringe benefits	30% of salary (based upon 1998 figures)	\$12,000
Supplies, materials, non-expendable property	Hand tools, gloves, etc.	\$500
Operations & maintenance	Fuel, Vehicle servicing	\$2,000
Capital acquisitions or improvements (e.g. land, buildings, major equip.)	none	\$0
PIT tags	# of tags: none	\$0
Travel	Updates and presentations	\$1,000
Indirect costs	39.2% of salary (based upon 1997 figures)	\$15,680
Subcontracts	Heavy equipment rental and operator	\$175,000
Other	none	\$0
TOTAL		\$246,180

Outyear costs

Outyear costs	FY2000	FY01	FY02	FY03
Total budget	\$246,180	\$121,180	\$121,180	\$121,180
O&M as % of total	5.00%	5.00%	5.00%	5.00%

Section 6. Abstract

Mid-Columbia River summer steelhead (*Oncorhynchus mykiss*) was listed as an endangered specie on August 11, 1997. Historically, Omak Creek, particularly the Mission Falls area, had cultural significance to the Colville Confederated Tribes. Mission Falls was an area where native people fished for salmon and steelhead. Photos from the early 1900's depict salmon drying racks and catch nets.

A railroad system was constructed along Omak Creek in the early 1900's to transport logs to a wood mill. Rubble from the railroad construction has fallen into the stream channel and created a barrier to migrating anadromous fish, particularly summer steelhead. Removal of rubble and railroad material from the stream channel will allow summer steelhead to access approximately 27 miles of potential spawning and rearing habitat.

In addition, improvement in land management practices within the watershed will improve water quality and fish habitat. Improvement in forestry practices will include better road design and location, road obliteration, and removal of improperly placed or failed culverts. Livestock management will include grazing strategies (rest and rest-rotation grazing pastures, livestock exclosures, and hardened livestock stream crossings, etc.) which will improve range condition as well as minimize impacts to the aquatic resources and riparian vegetation. This project is contracted to be completed within 10 years (2007).

Section 7. Project description

a. Technical and/or scientific background.

This project would assist in the funding and implementation of certain aspects of the Omak Creek Watershed Plan/Environmental Assessment (1995). Omak Creek is located in Okanogan County, Washington, within the reservation of the Confederated Tribes of the Colville Indians. The Omak Creek watershed has cultural significance to the twelve Colville Confederated Tribal Bands. Pictographs, depicting ancestral activities, are found throughout the watershed. Omak Creek itself, is a common cultural-use area for activities such as resource gathering, berry picking, ceremonial sweating, education, picnicking, and fishing. Fishing was important in Omak Creek since evidence of fish drying racks and nets were quite apparent in early photographs. Due to barriers, mid-stream reaches have been inaccessible by anadromous fish and land management practices within the watershed have reduced the quality of fish spawning habitat. Therefore anadromous stocks have virtually been non-existent in Omak Creek since the early 1900's.

This project is, in part, to strengthen anadromous fish populations, particularly summer steelhead (listed as endangered), in the mid and upper Columbia River Basin. Omak Creek was surveyed in 1992 by personnel of the Colville Confederated Tribes Fish and Wildlife Department. The collected information estimated and described the physical condition of the instream habitat from the confluence of the Okanogan River upstream 12.2 miles (TFW Ambient Monitoring Stream Segment Summary 1992). In 1995 a fish way was installed so anadromous fish could navigate a velocity barrier created by an approximately 70 foot long culvert at Omak Wood Product. In 1995, summer steelhead were collected at a fish weir in Omak Creek.

b. Proposal objectives.

- 1) Removal of rubble above Mission Falls allow fish passage.
- 2) Improve or protect over 60 miles of riparian vegetation
- 3) Improve and access habitat for anadromous & resident fish on 30 miles of stream & major tributaries
- 4) Improve surface water quantity by returning natural flow characteristics for most of watershed
- 5) Improve water quality by reducing water temperatures and reduce fecal coliform

c. Rationale and significance to Regional Programs.

The significance of this project is the restoration of summer steelhead in the Okanogan River Basin. The rationale is by re-establishing summer

steelhead in Omak Creek, the summer steelhead population in the Okanogan River Basin will strengthen and insure the resilience of the species. Also this is following the goal of the Habitat Conservation Plan for the Okanogan River which states, "In phase B, outplants to Omak Creek . . . will consist of the most genetically suitable smolts . . . of an adequate number to meet natural production capabilities."

d. Project history

The Omak Creek Watershed Plan/Environmental Assessment was completed in 1995. In 1996 implementation of the watershed plan was initiated by conducting surveys and assessments. The watershed was divided into 10 range units. The uplands, riparian area, and aquatic resources are evaluated for each range unit. Inventory has been completed on two of the range units with implementation starting in one of the units in November 1997. The implementation was the construction of one spring development for livestock use. Implementation is expected to begin on a larger scale in 1998.

e. Methods.

The rubble impeding fish passage upstream of Mission Falls was surveyed during August 1997. Specific boulders were identified that when removed should allow upstream passage by anadromous fish. Engineers from Natural Resources Conservation Service (NRCS) surveyed the stream and are currently determining the best alternative and cost effective method of removing the barriers. After the rubble is removed, the stream will be observed to determine if the flow allows fish to migrate upstream of Mission Falls.

Reaches of the mainstem of Omak Creek and associated tributaries will be inventoried and assessed for improvements of the existing riparian vegetation. Where the stream bank vegetation is scarce and unlikely to become re-established the area will be identified and an estimate of the amount of vegetation to be planted will be made. Native plant stock or seeds will be planted where possible. Native plants will be purchased from a distributor or grown at the Colville Confederated Tribe (CCT) Forestry greenhouse. Plantings will be performed by CCT Natural Resources, Range, and Fish & Game personnel, NRCS personnel, or other groups.

Habitat improvement will include but is not limited to improvements in bank stability by re-contouring the bank to slopes similar to nearby banks of high stability, incorporating revetments which protect unstable banks from erosive forces of high flows, and construct current deflectors such as point bars and vortex rock weirs to concentrate the thalweg to the center of the channel redirecting the erosive forces of high flows from the bank and creating mid-channel scour pools. Results would be monitored by increase in survival of resident and anadromous fish and improved in bank stability.

Surface water quantity would reflect the natural flow regime by reducing the amount of overland run off. To reduce the amount of overland run off road density would be decreased by closing access, removing culverts, increasing infiltration of the road bed and the establishment of vegetation on unused roads. Also, livestock spring developments would be developed to minimize soil compaction particularly along stream channels and disperse livestock use. Hydrographs of Omak Creek would be compared between current condition and after restoration practices had been implemented.

Water quality would also be improved by reducing surface erosion, lower water temperatures, and reduce the amount of fecal coliform detected in Omak Creek. Surface erosion would be decreased, again, by reducing road density and by planting vegetation on barren land areas. Water temperatures would be reduced by establishing riparian vegetation and reducing erosion created by anthropogenic activities. Construction of exclusion fences would limit livestock from entering the stream channel thus reducing the amount of fecal coliform delivered to the stream channel. Also, spring developments in the uplands will draw livestock away from stream channels. Water temperatures will be monitored with data loggers located in the main channel of Omak Creek and connected tributaries. Water samples from Omak Creek would be taken to analyze the water quality for fecal coliform and other contaminants.

f. Facilities and equipment.

The facilities that will be used for the continuation of this project would be the Fish and Wildlife Department, Department of Environmental Trust and Department of Forestry of the Colville Confederated Tribes and the Natural Resources Conservation Service in Okanogan, Washington. Special equipment to be used on this project would be heavy machinery to remove rocks above Mission Falls to allow passage and excavation equipment for re-contouring unstable banks along Omak Creek and connected tributaries.

g. References.

Omak Creek Watershed Plan/Environmental Assessment (1995). Natural Resources Conservation Service. Okanogan District Office. Washington.

Section 8. Relationships to other projects

Elements of the Omak Creek Watershed Plan/Environmental Assessment addresses part of the steelhead smolt production in the Okanogan River Basin as addressed in the Wells Settlement Agreement and mid-Columbia River Habitat Conservation Program.

Section 9. Key personnel

Chris Fisher, Anadromous fisheries biologist - CCT, lead fish biologist for in-stream restoration and bank stability improvements

Richard Fleanor, Range conservationist - CCT, lead range conservationist for range improvements

Randy Kelly, District conservationist – NRCS, Natural Resource Conservation Service Department Head

Robert Killian, Range conservationist - NRCS, project manager and range conservationist for the Omak Creek Watershed Plan/Environmental Assessment Plan

Rodrigo Lobos, civil engineer - NRCS, lead engineer for removal of obstructions upstream of Mission Falls

Gerald Marco, senior fisheries biologist – CCT, Department head of fisheries for the Colville Confederated Tribes Fish & Wildlife Department

Section 10. Information/technology transfer

Information will be routed between key personnel by personal communication, memo, or email transfer. Updates between agencies or departments will be routed by personal communication or meetings.